



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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DALLAS, TEXAS 75202 – 2733

September 20, 2018

Mr. Jayson Hudson
Policy Analysis Branch
Regulatory Division, CESWG-RD-P
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Mr. Hudson:

The U.S. Environmental Protection Agency (EPA) Region 6 has reviewed Public Notice (PN) SWG-2013-00147, dated August 21, 2018. The applicant, Freeport LNG Development, L.P. (FLNG), proposes to construct and operate a long-term Dredge Material Placement Area (DMPA) by enclosing a 196.5-acre area with the construction of 25-foot-high levees with two outfall structures to return decant. Development of the site would require infrastructure improvements including site security infrastructure, construction of levees, equipment staging areas, and hay bale/sediment control dikes for construction and operation activities. Construction of the project is anticipated to impact 174.7 acres of palustrine emergent wetlands and 19.1 acres of palustrine scrub/shrub wetlands. The project site is located in wetlands to the east of the Brazos River, north of the Gulf Intracoastal Waterway, along Levee Road, southwest of Freeport, in Brazoria County, Texas.

In addition to reviewing the information provided in the PN, the EPA participated in a project site visit with representatives from the project, the U.S. Fish and Wildlife Service, and the Texas Parks and Wildlife Department on September 7, 2018. The following comments are being provided for use in reaching a decision relative to compliance with the EPA's 404(b)(1) *Guidelines for the Specification of Disposal Sites for Dredged or Fill Material* (Guidelines) (40 CFR Part 230):

Upon review of the current proposal, the EPA has concerns whether the information provided by the applicant on the proposed project will sufficiently enable the U.S. Corps of Engineers Galveston District (Corps) to make a legally defensible permit decision in regard to compliance with the Guidelines. Under the Guidelines, no discharge of dredged or fill material may be permitted by the Corps if: (1) a practicable alternative exists that is less damaging to the aquatic environment so long as that alternative does not have other significant adverse environmental consequences, or (2) the nation's waters would be significantly degraded. Under the Guidelines, a project must incorporate all appropriate and practicable measures to first avoid impacts to wetlands, streams, and other aquatic resources and then minimize unavoidable impacts. After avoidance and minimization measures have been applied, the project must include appropriate and practicable compensatory mitigation for the remaining unavoidable impacts.

The Guidelines also require evaluation of all direct, secondary and cumulative impacts reasonably associated with the proposed discharge including effects on wildlife habitat, aquatic ecosystem diversity, stability and productivity, recreation, aesthetics, and economic values.

The applicant has indicated they have avoided and minimized the environmental impacts by conducting an alternatives analysis to assess the potential environmental impacts of practicable alternatives. The current analysis independently evaluates various options for beneficial use, federal DMPAs, offshore dredged material disposal sites (ODMDS), sediment diversions, and private DMPAs. In the alternatives analysis, the applicant has stated the purpose of the project is to develop a long-term solution for the annual placement of maintenance material dredged from the FLNG berth. Of the 10 screening criteria identified as part of the alternatives screening process, one of the alternative screening criteria identifies a maintenance dredging duration of 15 years as a capacity requirement. As it would be anticipated that the FLNG Berth will operate beyond a 15-year timeframe, the EPA recommends the applicant develop a comprehensive long-term dredged material management plan beyond the 15-year maintenance dredging horizon identified. The evaluation of disposal alternatives should additionally consider combinations of alternatives and incorporate an adaptive management approach for the on-going identification of available disposal options.

A separate alternatives screening criterion limits potential disposal to locations within 5 miles of the FLNG berth. It is unclear as to the need for the transport distance limitation as dredging activities are feasible beyond a 5-mile pump distance. The alternative analysis also states that FLNG would like to reserve the right to allow outside users to utilize the proposed long-term DMPA. This request would indicate that the design capacity for the proposed DMPA is greater than the maintenance dredging disposal need, and a potentially smaller DMPA footprint may be an option. Specific to beneficial use options, site alternatives were eliminated due to not having sufficient capacity for the full 15 years of maintenance dredging. Given the annual nature of the maintenance dredging activities, it is unclear as to the necessity for a single beneficial use site as dredging equipment is typically mobilized for each dredging event. In addition to evaluating the viability of a combinations of alternatives, the EPA recommends the applicant reconsider the screening criteria and provide additional alternatives evaluation information to assist the Corps in making its factual determinations and to help ensure the spirit of the Guidelines are met.

The alternatives analysis does include a section on cumulative and secondary impacts. The jurisdictional wetlands that would be impacted by this project not only provide wildlife habitat but also perform a range of valuable functions including water quality maintenance as well as stormwater and flood detention. Estuarine marshes provide buffering areas that mitigate the effects of waves. As stated in the alternatives analysis, coastal wetlands along the Texas Gulf Coast have been heavily impacted by cumulative development, including industrial activity, and this project would further contribute to impacts resources in the watershed.

The applicant has provided a draft permittee responsible mitigation (PRM) plan that includes mitigation for the proposed impacts by restoring 116 acres and enhancing 56.6 acres of palustrine emergent wetlands along Bastrop Bayou. One of the goals of the PRM plan is to create herbaceous prairie

wetlands, however, the impact site consists primarily of coastal marsh. The EPA has concerns that the currently proposed PRM will not provide in-kind replacement of the functions and habitats lost at the impact site. According to the information in the PN, the wetland delineation and impacts identified have not been verified by the Corps and details to support functional quality of the wetlands at the impact site and the proposed mitigation site have not been provided. Attachment B to the PRM plan includes an iHGM summary that presents the total physical, biological and chemical functional capacity units at the impact site and the proposed mitigation site based upon a functional assessment using the riverine herbaceous/shrub interim hydrogeomorphic model (iHGM). As the impact site appears to consist of a brackish coastal marsh environment, the applicant should conduct a wetlands assessment using an appropriate functional assessment (i.e., tidal fringe model) to ensure replacement of functional losses at the proposed impact site. The EPA recommends that the applicant conduct in-kind mitigation to compensate for the proposed impacts, and if out-of-kind mitigation is authorized, a mitigation ratio multiplier should be applied. Additionally, given the potential time between direct impacts being realized by construction activities at the proposed project site and the PRM achieving success criteria, it may also be appropriate to require additional mitigation for temporal losses that occur. If it has not yet done so, we recommend the applicant submit documentation supporting the appropriate functional assessments to the Corps to assist with ensuring in-kind mitigation requirements are fulfilled.

PRM plan mitigation success criteria and monitoring requirements should be sufficiently robust to ensure the mitigation approach effectively compensates for the significant project wetland impacts. The proposed PRM plan performance standards include vegetation coverage, a limitation on invasive species, and the presence of all wetland indicators. To clarify the vegetative coverage standard, the percent areal coverage should be based upon desired wetland species. We further recommend incorporating performance standards in all wetland areas for vegetative community composition/species diversity that are based on data from reference area wetlands. The PRM monitoring requirements are currently proposed for a period of 5 years. If the performance standards are not achieved within the first 2 growing seasons, the EPA recommends the monitoring requirements be extended beyond the identified 5-year period.

The PRM plan includes a section on long-term management and financial assurances. FLNG, or its assignee, would be the responsible party for long-term management and provide the necessary funds for maintenance activities. Short-term and long-term financial assurances would be put in place prior to permit issuance. The EPA recommends the applicant develop a specific itemized budget for the short-term financial assurances and a detailed average annualized long-term management costs. The applicant should also demonstrate that the amount of the proposed long-term funding endowment will be adequate to maintain and manage the aquatic resources on the site and defend the conservation easement in perpetuity, considering inflation and any investment fees. The EPA recommends this information to be provided to the Corps for evaluation.

In summary, the EPA recommends the Corps work with the applicant to enhance the information provided to assist the Corps in determining compliance with the Guidelines and provide supplemental information to ensure adequate compensatory mitigation is provided for all unavoidable impacts.

Thank you for the opportunity to review and comment on this PN, and if you have any questions on these comments, please contact Paul Kaspar of my staff, at kaspar.paul@epa.gov or 214-665-7459.

Sincerely,



for
Maria L. Martinez
Wetlands Section Chief

cc: U.S. Fish and Wildlife Service, Clear Lake, TX
National Marine Fisheries Service, Galveston, TX
Texas Commission on Environmental Quality, Austin, TX
Texas Parks and Wildlife Department, La Marque, TX